Interpretative Analysis and Testing Statistics to test questions testing the Mobile Government questionnaire against the model of readiness and successful adoption

1st Muhammad Syarif Hartawan
Information System,
Faculty of Technology,
University of Krisnadwipayana,
Jakarta, Indonesia
Asia e University, Malaysia
muhammadsyarif@unkris.ac.id

2nd IGN Mantra
Informatics Engineering
Perbanas Institute
Jakarta, Indonesia
ign.mantra@perbanas.id

3rd I Wayan Widi Pradnyana
Information System
Universitas Pembangunan Nasional
Veteran Jakarta
Jakarta, Indonesia
wayan.widi@upnvj.ac.id

***Abstract*— In Mobile Government Research is increasingly developing in the era of information that is very quickly accessible to employees in the achievement of information. The purpose of this study is at the level of readiness and success of mobile government users through analysis. Research questionnaires about the mobile government that will be obtained will be analyzed using SMARTPLS 2. which includes testing. This research produces interpretive data to confirm the results of statistical analysis in testing the cellular government questionnaire. The results of this study are expected to be a reference and literature for the government in developing cellular governance and can provide solutions for further development of cellular governance. From the results of this study, 67% of respondents have the ability to use mobile at the level of 81-100%. and 63% of respondents stated that the position is very ready to use the mobile government (m-Gov).**

Keywords— e-Government, m-Government, Model Development, Adoption Model, User Experience (UX).

I. INTRODUCTION

Progress in research is the publication of the results of a questionnaire assessment of respondents. Therefore the purpose of this study is to examine the questionnaire questions for testing mobile government research is very necessary to be accurate. Assessments are based on the perceptions of the respondents and the researcher's perspective.

To be able to measure this respondent researchers used statistical analysis and interpretation analysis in research conducted through filling out questionnaires involving responders from government employees and general procedures that are often done [1.2]. Sometimes in the combined analysis literature, it has not been clearly revealed. So that the questions from the questionnaire were taken from previous work and new instruments for the development of technology that developed at the beginning of this research [3].

II. RESEARCH METHODS

This study systematically collects related data and uses descriptive analysis methods by taking examples of mobile government users of government employees. Observation and presentation of data analysis is a technique used in this study so that it can reveal the latest facts, or the analysis data obtained will be more objective.

In addition to reviewing the literature study, this stage also formulates the research program that will be conducted. Then, in the second stage (S2) a model was developed by adopting, combining and adapting the previously developed model. This stage begins with the first sub-chapter (S2.1) by developing a set of assumptions based on the theory selected and initiated (Table 1).

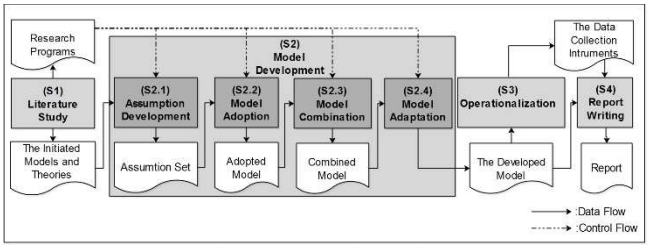

Figure 1. Research procedure

Finally, the stage of making a report (S4) the researcher makes a report on the research model developed and the data collection instrument which is then proposed at the reporting stage, in terms of conducting research.

In table 1 contains the theory of Mobile Government (m-Gov) readiness and success models.

TABLE I
LIST OF THE BASIC MODELS AND THEORIES

List of the Basic Models and Theories	References
Information processing theory	[13, 14]
Model of IS readiness and success	[4, 5, 6, 9, 10, 15]
Usability theory	[7]
Security theory	[8]
User experience theory	[11, 12]

III. RESULTS AND DISCUSSION

Table 2 lists the variables that will be used for mobile government (m-Gov) research.

TABLE II
LIST OF THE VARIABLES

Var.	Definitions
OPT	The degree of trust and positive views on the use of IS/IT
INN	The degree of tendency to try and explore the use of IS/IT
DIS	The degree to understand the inconvenience of using IS/IT and lack of mastery of the use of IS/IT
INS	The level of understanding the lack of trust in the use of IS raises doubts about its use
USB	The degree to assess how easily the system interface is used
INQ	The degree to which information can consistently meet all the requirements and expectations of users in doing their work
SYQ	The degree to describe the quality of IS content
SVQ	The degree of system service excellence to its users

USF	The degree of user satisfaction when utilizing IS/IT as a result of the project
UEX	User Experience
GSS	IS achievement is based on planning implementation

Table 3 lists the indicators that will be used for this research.

TABLE III
LIST OF THE INDICATORS

Indicators	Definitions
Easiness (OPT1)	The degree related to the ability of a system to provide freedom from obstacles, difficulties, and problems
Connectivity (OPT2)	The degree related to the ability of a system to connect successfully with other systems
Efficiency (OPT3)	The degree associated with achieving the system to produce output compared to the resources needed to achieve output
Problem Solving (INN1)	The degree related to system support to find solutions to problems
Independence (INN2)	The degree associated with the system's ability to support its users is free of control or influence
Challenge (INN3)	The degree associated with system support is successfully handling or achieving something in a difficult situation or problem
Complexity (DIS1)	The degree associated with system features are confusing or difficult to understand
Difficulty (DIS2)	The degree related to the condition of a system that cannot be operated easily
Dependence (DIS3)	The degree related to the condition of a system that requires another party to operate it
Failure (INS1)	The degree associated with the possibility that an unpleasant or dangerous system might occur
Threat (INS2)	The degree associated with the system situation that can cause danger or danger
Reducing Interaction (INS3)	The degree related to the implementation of a system that makes human interaction less in size, number, and importance
Efficiency (USB1)	The degree of efficiency of IS use
Learnability (USB2)	The degree of ease in studying IS usage
Memorability (USB3)	The degree of ability to remember how to interact with IS without difficulty or error
Accuracy (INQ1)	The degree of conformity of information produced by the system to the actual standard
Timeliness (INQ2)	The degree of accuracy of IS information processing at the planned time duration
Completeness (INQ3)	The degree of information produced by IS is the whole or without the missing part
Ease of Use (SYQ1)	The degree of freedom by IS from obstacles, difficulties, and problems during its use
Maintainability (SYQ2)	The degree associated with the ease of IS in its maintenance
Respons Time (SYQ3)	The degree related to the amount of time it takes for the IS to respond to the user's command
Responsiveness (SVQ1)	The degree of reaction IS to serve the user with the appropriate way, time and situation
Flexibility (SVQ2)	The degree of adaptation IS to serve its users according to the demands requested
Security (SVQ3)	The degree of an integrated security system to service users safe from attacks, hazards, or unexpected damage
Security Access (SCR1)	The degree of system security when a user login
Data Confidentiality (SCR2)	The degree of system capability in maintaining user data so that it is difficult for others to know and understand
Security Guarantee (SCR3)	The degree of system capability in ensuring the security of the user's personal information
Efficiency (USF1)	The degree of IS user satisfaction based on achieving the system to produce output compared to the resources needed to achieve output
Effectiveness (USF2)	The degree of IS user satisfaction is based on the ability of the system to meet the needs of users to achieve their goals
Flexibility (USF3)	The degree of IS user satisfaction is related to the adaptability of the system according to the demands requested
Navigation (UEX1)	The degree of Mobile App's ability to allow users to easily and quickly find the functionality or information they need
Error Handling (UEX2)	The degree of Mobile App's ability to minimize user errors. Mistakes must be easy and quickly understood so that users can move forward with their tasks
Understanding (UEX3)	The degree of capability of Mobile App with its small screen can provide instant application function security
IS Efficiency (GSS1)	The degree related to the comparison of the value of the IS output and the resources needed to reach the output
IS Effectiveness (GSS2)	The degree associated with the ability of the system's ability to meet the needs of users to achieve their goals
User Satisfaction (GSS3)	The extent to which SI helps users create value for their business

The author distributed 54 questionnaire questions, which is distributed based on the characteristic experience of the respondent profile. Distribution Questionnaire via Google Form. Data collected is processed using SmartPLS 2. a list of questions can be seen in table 4 below.

TABLE IV
LIST OF THE QUESTIONNAIRE STATEMENTS

Statement of the questionnaires
OPT1 - The system is free of obstacles, difficulties, and problems
OPT2 - The system can be easily connected with other systems
OPT3- The system runs efficiently
INN1- The system is a problem solving tool
INN2- System helps users, free from control and influence
INN3- System helps users reach their goals in difficult conditions/problems
DIS1- The system confuses users in its use
DIS2- The system is not easy to use
DIS3- The system is not free to use
INS1- The system does not work according to its development plan
INS2- The system is in a condition that can cause harm or danger
INS3- The system makes users interact less
USB1- The system efficient to use
USB2- System easy to learn
USB3 - The way to use the system is easy to remember
INQ1- The system produces information accurately
INQ2- The system produces information in a timely manner
INQ3- The system produces complete information
SYQ1- The system is easy to use
SYQ2- The system is easy to maintain
SYQ3- The system is able to respond quickly to the commands given
SVQ1- The system provides services quickly
SVQ2- The system provides flexible services according to user conditions
SVQ3- The system provides safe services
SCR1- The system is generally accessible
SCR2- The system can maintain the confidentiality of user data
SCR3- The system can guarantee the security of the user's personal information
USF1- Users are satisfied with the level of efficiency of the system
USF2- users are satisfied with the level of effectiveness of the system
USF3- Users are satisfied with the level of flexibility of the system
UEX1- Features, and Information in Mobile App that users need are fast and easy to find

UEX2- Mobile App can minimize usage errors, input and click errors can be easily and quickly understood by users
UEX3- Mobile App functions can be understood instantly
GSS1- The implementation of government systems is carried out efficiently
GSS2- The implementation of government systems is carried out effectively
GSS3- Application of government systems increases user satisfaction

Characteristics of the respondents' data are education data, position data, experience data, and skill level data in using mobile applications (m-Government). The results of data collection can be seen in table 5 below about the characteristics of respondents in government seen the readiness and success in the use of government mobile applications (m-Government).

TABLE V
CHARACTERISTIC RESPONDENT

Measures	Items	%
Education	High School	0
	Diploma	0
	Bachelor	67
	Master	33
	Doctor	0
Position	Minister	0
	Secretary-General / Director General / Head of Agency	0
	Head of Bureau / Head of Center / Agency Secretary/Director's Secretary	0
	Head of Division	0
	Head of Sub Division	23
	Head of Section	20
	Staff	57
Experience	< 2 years	0
	2-5 years	3
	5-10 years	57
	> 10 years	40
Skill	Very unskilled	0
	Unskilled	0
	Less skilled	0
	Skilled	77
	Very skilled	23

source: Statistical Processing

TABLE VI
READINESS AND SUCCES

Measures	Items	%
Level Of Readiness For Use Of Mobile Government (m-Gov)	Very Ready	63
	Ready	30
	Less Ready	7
	Not Ready	0
	Very Unprepared	0
Level of Mobile Government (m-Gov) Usage	<20%	0
	21-40%	0
	41-60%	3
	61-80%	30
	81-100%	67
Factors That Influencing Readiness Of Use Mobile Government (m-Gov) (Technical)	Availability of costs	37
	Availability of HR	30
	Availability of technology	17
	Availability of Data	17
Factors That Influencing Readiness Of Use Mobile Government (m-Gov) (Managerial)	Availability of costs	47
	Availability of HR	23
	Availability of technology	23
	Availability of Data	7
Factors That Influencing Readiness Of Use Mobile Government (m-Gov) (Institutional)	Work System and Culture	17
	Support Staff	10
	Coordination Staff	10
	Commitment Staff	17
	Leadership Support	7
	Leadership Coordination	17
	Leadership Commitment	23
The Readiness Factor Affects Use of Mobile Government (m-Gov)	Very influential	53
	Take effect	40
	Less influential	7
	No Effect	0
	Not Very influential	0

source: Statistical Processing

The results of data collection on the characteristics of respondents can be seen in Table that in terms of readiness and success in the use of mobile government (m-Gov), it provides recommendations for researchers that 67% of the data collected by respondents was filling in 81-100% having a level of mobile users Government (m-Gov). And 63% of respondents expressed their readiness at the level of being very ready to use the mobile government (m-Gov).

The Statistical Analysis Result

Stages of statistical analysis, there are several stages in processing the questionnaire. The stages consist of evaluating the reflective measurement model and evaluating the structural model. Table 7 shows the test data on Reliability And Validity Of Construction.

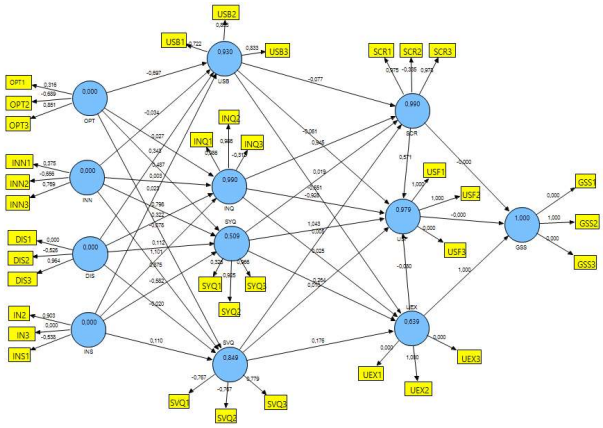

Figure 3.1. Research model mobile government

TABLE VII.
CONSTRUCT RELIABILITY AND VALIDITY

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
OPT	-0,386	0,118	0,433
INN	-0,639	0,115	0,387
DIS	-0,346	0,097	0,402
INS	-0,134	0,066	0,368
USB	0,409	0,449	0,636
INQ	0,475	0,742	0,681
SYQ	0,610	0,816	0,631
SVQ	0,433	0,319	0,594
SCR	0,453	0,727	0,673
USF	0,600	0,800	0,667
UEX	0.000	0,333	0,333
GSS	0,000	0,333	0,333

TABLE VIII.
CROSS LOADING

	DIS	GSS	INN	INQ	INS	OPT	SCR	SVQ	SYQ	UEX	USB	USF
DIS1	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
DIS2	-0,526	0,122	0,001	0,050	0,125	0,327	0,070	0,089	-0,099	0,122	-0,268	-0,138
DIS3	0,964	-0,219	-0,156	-0,277	-0,538	-0,668	-0,299	-0,135	-0,068	-0,219	0,833	-0,020
GSS1	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
GSS2	-0,228	1,000	0,580	0,518	0,521	0,812	0,593	0,504	0,530	1,000	-0,722	0,380
GSS3	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
IN2	-0,110	0,502	0,802	0,986	0,903	0,500	0,975	0,779	0,326	0,502	-0,372	-0,030
IN3	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
INN1	-0,039	0,352	0,375	0,069	0,079	0,286	0,095	0,083	0,919	0,352	-0,251	0,927
INN2	0,135	-0,273	-0,656	-0,175	-0,195	-0,255	-0,186	-0,733	-0,322	-0,273	0,236	-0,287
INN3	-0,084	0,452	0,769	0,950	0,865	0,437	0,941	0,744	0,192	0,452	-0,331	-0,122
INQ1	-0,110	0,502	0,802	0,986	0,903	0,500	0,975	0,779	0,326	0,502	-0,372	-0,030
INQ2	-0,110	0,502	0,802	0,986	0,903	0,500	0,975	0,779	0,326	0,502	-0,372	-0,030
INQ3	0,923	-0,215	-0,163	-0,313	-0,544	-0,689	-0,335	-0,124	-0,105	-0,215	0,799	-0,051
INS1	0,964	-0,219	-0,156	-0,277	-0,538	-0,668	-0,299	-0,135	-0,068	-0,219	0,833	-0,020
OPT1	-0,404	0,198	0,033	0,080	0,121	0,316	0,117	0,109	-0,082	0,198	-0,239	-0,126
OPT2	0,923	-0,215	-0,163	-0,313	-0,544	-0,689	-0,335	-0,124	-0,105	-0,215	0,799	-0,051
OPT3	-0,232	0,939	0,626	0,594	0,592	0,851	0,631	0,566	0,531	0,939	-0,698	0,337
SCR1	-0,110	0,502	0,802	0,986	0,903	0,500	0,975	0,779	0,326	0,502	-0,372	-0,030
SCR2	0,923	-0,215	-0,163	-0,313	-0,544	-0,689	-0,335	-0,124	-0,105	-0,215	0,799	-0,051
SCR3	-0,134	0,646	0,811	0,959	0,883	0,565	0,978	0,770	0,381	0,646	-0,465	0,049
SVQ1	0,113	-0,275	-0,616	-0,194	-0,203	-0,246	-0,204	-0,767	-0,250	-0,275	0,216	-0,197
SVQ2	0,113	-0,275	-0,616	-0,194	-0,203	-0,246	-0,204	-0,767	-0,250	-0,275	0,216	-0,197
SVQ3	-0,110	0,502	0,802	0,986	0,903	0,500	0,975	0,779	0,326	0,502	-0,372	-0,030
SYQ1	-0,110	0,502	0,802	0,986	0,903	0,500	0,975	0,779	0,326	0,502	-0,372	-0,030
SYQ2	0,021	0,380	0,365	-0,020	-0,017	0,251	0,020	0,106	0,925	0,380	-0,229	1,000
SYQ3	-0,024	0,426	0,425	0,122	0,118	0,334	0,150	0,207	0,966	0,426	-0,277	0,946
UEX1	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
UEX2	-0,228	1,000	0,580	0,518	0,521	0,812	0,593	0,504	0,530	1,000	-0,722	0,380
UEX3	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
USB1	-0,228	1,000	0,580	0,518	0,521	0,812	0,593	0,504	0,530	1,000	-0,722	0,380
USB2	0,964	-0,219	-0,156	-0,277	-0,538	-0,668	-0,299	-0,135	-0,068	-0,219	0,833	-0,020
USB3	0,964	-0,219	-0,156	-0,277	-0,538	-0,668	-0,299	-0,135	-0,068	-0,219	0,833	-0,020
USF1	0,021	0,380	0,365	-0,020	-0,017	0,251	0,020	0,106	0,925	0,380	-0,229	1,000
USF2	0,021	0,380	0,365	-0,020	-0,017	0,251	0,020	0,106	0,925	0,380	-0,229	1,000
USF3	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

IV. CONCLUSION

This research was conducted to develop a model of readiness and the successful adoption of the mobile government (m-Gov). This study aims to provide knowledge and alternatives and recommend models that can be applied to determine the readiness and success of the adoption of m-Gov. In developing the model, referring to previous studies, researchers developed based on previous theories rather than empirical studies. The researcher developed a model of m-Gov's readiness and success by adopting, combining, and adapting from the ISRS model which consisted of a model of readiness and success models, usability theory, security theory, and user experience theory in terms of assessing the success of government systems. The IPO logic is used by the author as a model development assumption.

In the results of readiness and success for the use of cellular governance (m-gov), it shows that 67% of respondents from the data collected by respondents fill in 81-100% of respondents having a level of Government cellular users (m-Government). And 63% of respondents expressed their readiness at the level of being very ready to use cellular government (m-Gov).

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